

REMARKS

This Amendment is in response to the Office Action dated July 6, 2006, in which claims 1-14 were rejected. Applicants respectfully request reconsideration and allowance of all pending claims in view of the above-amendments and the following remarks.

I. CLAIM AMENDMENTS

Independent claim 1 is amended to introduce that, in the second communication mode: “a communication channel using the said multiple carrier modulation being solely assigned to a downlink for the communication between the said transmission device and the said receiving terminal,” as shown and described in figure 1 and page 14, lines 21-24 of the specification, for example.

Applicants respectfully request that the amendments be entered since they should not require significant further consideration and/or search. The Amendments simply clarify that in the second communication mode, the communication channel using the multiple carrier modulation is solely assigned as a downlink channel.

II. CLAIM REJECTIONS

Claims 1, 4-5, 9, 11 and 12-14 are rejected by the Examiner as being anticipated by Chen (US 2005/0059401).

Claims 2 and 3 are rejected by the Examiner as being unpatentable over Chen in view of Alard (U.S. Patent No. 6,584,068).

Claims 6 and 7 are rejected by the Examiner as being unpatentable over Chen in view of Jou (U.S. Patent No. 6,925,067).

Claim 8 is rejected by the Examiner as being unpatentable over Chen in view of Bohnke (U.S. Patent No. 6,567,383).

Claim 10 is rejected by the Examiner as being unpatentable over Chen in view of Dolgonos et al. (US 2002/0147978).

A. **Summary of an Embodiment of the Disclosure**

The disclosure relates to data transmission and methods, particularly in a cellular network, and particularly at high-speeds.

The general principle of an embodiment of the invention is based on the changeover from a first communication mode using a single carrier modulation for communications management (setting up, maintaining and closing of a communication) based on, for example, UMTS channels (in particular a FACH type common channel), to a second communication mode based on a multiple carrier modulation (particularly of the OFDM type with a guard interval or IOTA) for high-speed data transmission.

The embodiment enables the changeover from a first communication mode using a single carrier modulation to a second communication mode based on a multiple carrier modulation, a multiple carrier channel being preferably assigned to communication between a base station and a terminal and not limited to a broadcasting application concerning several terminals. According to the embodiment, the first and second communication modes are implemented successively and alternately.

B. Chen et al.

Chen et al. relates to wireless telecommunications and handoff from one base station to another base station, considering their capabilities.

More precisely, Chen et al. disclose a method for a wireless telecommunications infrastructure to facilitate a remote station handoff from a set of single carrier-compliant base stations to at least one multi-carrier compliant base station, while a remote station is in the coverage area of both types of base stations (paragraph 28).

For instance, a handoff between a single carrier base station BS1 and a multi-carrier base station BS3 is described in figure 6, for a remote station X. According to this example, BS3, which is a multi-carrier handoff candidate, receives a handoff message from BS1, instructing it to cease single carrier communications with BS1, and to begin multi-carrier communications for the communication between BS3 and the remote station.

According to Chen, there is a changeover in the transmission protocol, i.e. the remote station changes from a single carrier transmission protocol to a multi-carrier transmission protocol, only when the terminal (remote station) communicates with a new base station.

For example, according to figures 5, 6 and 7, the terminal communicates

according to a single carrier transmission protocol with base stations BS1D and BS1E, and then according to a multi-carrier transmission protocol with base station BS3B.

The present disclosure does not try to solve the problem of handoffs between base stations. Rather, for communications between a terminal (“receiving terminal” according to claim 1) and the same base station (“transmission device”), use a first communication based on a single carrier modulation for setting up a communication, and then a second communication mode using a multiple carrier modulation for high speed data transmission, the first and second communication modes being implemented successively and alternately.

As illustrated in figure 1 of the present application, a single carrier downlink channel and a single carrier uplink channel 111 are therefore used for the first communication mode, whereas only a multiple carrier downlink channel 112 is used for the second communication mode.

Moreover, Chen et al. do not disclose that the changeover from the first communication mode to the second communication mode is implemented according to at least one signaling information transmitted by the transmission device to the receiving terminal through the first communication mode. According to Chen et al., a special message, called handoff message needs to be sent from a single carrier base station to a multi-carrier base station (paragraph 82).

As a consequence, Chen discloses the changeover from a single carrier transmission protocol to a multi-carrier transmission protocol when a terminal is moving and communicates with different base stations.

However, Chen et al. do not describe, nor suggest, the implementation of the two communication modes successively and alternately, the first mode using a single carrier modulation and the second mode using a multi-carrier modulation, for communications between a terminal and the same base station.

In other words, it doesn’t describe establishing a communication with the first communication mode, and then use the second communication mode to exchange data at high-speed between the base station and the reception terminal, using only a downlink channel.

III. CONCLUSION

Chen et al therefore do not anticipate the elements of claim 1 or its rejected dependent claims. For similar reasons, Chen et al. also does not anticipate the elements of independent claims 12-14.

Moreover, claims 1-14 are new and non-obvious in view of Alard, Jou, Bohnke, or Dolgonos.

Applicants therefore respectfully request that the rejections of claims 1-14 be withdrawn.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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